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EXAMINER

PARKER, FREDERICK JOHN

ART UNIT

PAPER NUMBER

1762

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718401

Applicant(s)

Examiner

Group Art Unit

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE — 3 — MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 4/22/03

☒ This action is **FINAL**.

- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-25, 28-38 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-25, 28-38 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

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Response to Amendment

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1,28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejections are necessitated by amendment.

- Claims 1,28 are vague and indefinite because the relative term "high" does not precisely define the intended air stream pressure required to carry out the method, its meaning is undefined, and one skilled in the art would have been unable to ascertain its scope given the broad meaning of the overall phrase.

Claim Rejections - 35 USC § 102

3. The rejections under this heading of the previous Office Action are withdrawn in view of amendments.

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Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. The rejections under this heading of the previous Office Action are withdrawn in view of amendments and replaced by the new rejections below as necessitated by amendment.

6. Claims 1-11, 14, 16-17, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'571 in view of Gaeta et al US 5624471 alone, or alternatively further in view of Argobast et al US 5011709 or GB 1121082 .

JP'571 teaches a method for coating paper, wood, plastic sheets, etc to form simulated wood or stone patterns comprising the steps of ; applying to the substrate a printed first ink pattern layer free of liquid repellant (= "decor layer"); applying a second printed ink pattern layer of an electron beam or ultraviolet-curing acrylate coating material containing the liquid repellant substance (wax, silicone, etc), see page 7, 13-19; and then applying thereon a liquid top coating (= "wear layer") which may comprise cross-linkable acryl(ic) resin (per Applicants description of lacquer, specification page 8,20-21) which may be cured by ultraviolet or electron beam radiation (page 12, 2 middle paragraphs). The liquid coating is repelled from the repellant of the second pattern layer,

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thereby forming concave grooves or indents corresponding to the second pattern layer ("surface feature"). The description and composition of the second pattern layer and Applicants' "wetting repellant lacquer" (described on top of page 9) are essentially the same. Furthermore, Applicants state the repellant lacquer is applied by ink jet printing on page 13, lines 30-31 & Example 1, which would appear to be an impossibility for conventional lacquers given their viscosity/ stickiness. The use of "lacquer" instead of "ink" by Applicants thereby becomes an issue of semantics, the Examiner considering the two to be the same in view of the fair readings of the reference and Applicants' specification.

Alternatively, given the similarities of Applicants' "wetting repellant lacquer" and the repellant ink of the reference, it would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the method of JP' 571 by applying liquid lacquer coating materials of similar composition and function because of the expectation of producing similar decorative simulated wood or stone patterns.

Page 6, last paragraph states the second pattern layer may be transparent or colored (same as "translucent") or opaque, per claims 10-11.

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Example 1 of the reference states the second pattern layer comprising repellant silicone is cured prior to applying the topcoat/ wear layer, per claim 14.

Per claim 3, while multiple applications of the topcoat/ wear layer are not taught, the application of multiple layers with at least some curing therebetween would have been an obvious step to one of ordinary skill to provide a desired thickness for imparting desired protective characteristics, appearance, etc.

As to claim 16, the repellant second layer is applied by any conventional printing method (page 8, paragraph 3) which would encompass ink jet printing and hence its use in the process would have been an obvious variation for applying the liquids in a design since ink jet printing is conventionally used to print liquids in a design.

As to claim 17, the "various kinds of woods and plywoods, etc" taught on page 5, lines 11-13 of JP'571 would have encompassed or reasonably suggested Applicants' particle board or fiber board, and hence their use in the process would have been obvious because of the expectation of similar results.

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As to claims 23-25, since the reference taught to use the process for a "wood grain pattern", it would have been obvious to configure the second layer to form the grain design.

Inclusion of wear particles into the upper topcoat layer and subsequent blowing off of unadhered particles are not cited.

Gaeta et al teaches on col. 2, 14-20 and col. 3, 37-41 that UV polymerizable binder resins including epoxy-acrylates, epoxy-novalacs, etc are applied to cellulosic substrates (paper) and used to bind abrasive grit particles including alumina, silicon carbide, diamond, etc and mixtures thereof. The examples cite particle sizes of 180 grit (approx. 80 microns) which is within the range of claim 4. While the diamond particle size of claim 7 is not cited, the particle sizes of Gaeta et al are not limited, and the use of particle sizes based upon application and particle size of commercially available diamond materials would have been obvious. Application of particles by any conventional means, e.g. sprinkling, would have been an obvious step which would have not otherwise effected the overall outcome of the process step. While removing unadhered particles by a pressurized air stream (per specification page 19, 12-13) is not expressly taught, it is the Examiner's position that it is known and convention in the coating arts (and everyday life) to remove/ blow excess particulate matter with

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an air stream (e.g. blowing from the mouth, pressurized air cans or pressurized air lines, etc). Nonetheless, the Examiner introduces Arbogast et al (col. 3, 35-38) or GB 1121082 (page 1, 32-36) which teaches to remove/ blow off excess particles with pressurized air in a particle coating process to allow their recycle and reuse which improves process cost efficiency.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of JP'571 by incorporating abrasion resistant particles in the curable layer as taught by Gaeta et al to provide the desired hardness and abrasion resistance and further removing unadhered particles by pressurized air as taught by Arbogast et al or GB 1121082 to allow such particles to be recycled and reused in the coating process.

7. Claims 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'571 in view of Gaeta et al US 5624471.

JP'571 and Gaeta et al are cited for the same reasons discussed above. The printing and applying steps of claim 36 are the same as discussed above. As to claims 35 and 37, it would have been within the purview of one skilled in the art to simply apply design portions to a larger, planned , or outlined ("plurality of segments") design to produce an overall design lay-out. In any non-random design, one of ordinary skill would have planned and/ or programmed specific

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portions of a design to be applied, and as such Applicants' claims appear to simply state an obvious thought process or design plan. Conversely, one of ordinary skill forming a design would NOT apply design portions in a random fashion without regard to the desired end-product. It is well established that an artisan must be presumed to know something about the art apart from what a reference expressly teaches, *In re Jacoby* 135 USPQ 317 & *In re Sovish* 226 USPQ 771; the conclusion of obviousness may be derived from "common knowledge and common sense" by the person of ordinary skill, *In re Bozek* 163 USPQ 145. The claims are therefore simply obvious and ordinary steps apparent to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the process of JP'571 in view of Gaeta by applying the design in individual portions to form an overall design scheme because such a step would have been apparent to the skilled artisan as a simple way to form a larger, complex design.

8. Claims 15,19-22,30-34,38 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'571 in view of Gaeta et al alone, or alternatively further in view of Argobast et al US 5011709 or GB 1121082 and further in view of Pieters GB2 324 982.

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JP'571, Arbogast and GB 1121082 cited for the same reasons discussed above, which are incorporated herein. Computer-controlled application of designs is not cited.

Pieters teaches to apply decorative patterns of UV curable inks onto a wood-based substrate by photographically or digitally imaging a wood-grain pattern from an original veneer, wood, or marquetry design; downloading the pattern into a computer; and then using computer-aided screen printing to apply the UV curable ink onto the substrate.

As to claims 30-34 and 38, selecting a digitized design at a remote location relative to a manufacturing facility and then using that design in the computer controlled application of designs (Pieters) is simply an obvious variation, given the technological advances of telecommunications of the past decade, without yielding any difference in outcome. It simply makes no difference if the design downloaded into the computer of Pieters to image a wood grain (or other) pattern is transmitted by mail, Internet, FAX, etc because the outcome would be the same and the means of transmitting the design would have been obvious and conventional. It is well established that an artisan must be presumed to know something about the art apart from what a reference expressly teaches, *In re Jacoby* 135 USPQ 317 & *In re Sovish* 226 USPQ 771; the

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conclusion of obviousness may be derived from "common knowledge and common sense" by the person of ordinary skill, In re Bozek 163 USPQ 145. Hence claims 30-34 merely represent an obvious variation of Pieters using subsequent, ordinary, and conventional technological advances to produce an identical outcome.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of JP'571 in view of Gaeta et al and further in view of Arbogast or GB 1121082 by incorporating the computer-aided printing of Pieters to apply the UV curable design coatings because of the expectation of producing the designs required to make the decorative sheet.

9. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'571 in view of Gaeta et al alone, or alternatively further in view of Argobast et al US 5011709 or GB 1121082 and further in view of Siry et al US 4501635.

JP'571, Gaeta, Arbogast, and GB 1121082 are cited for the same reasons discussed above, which are incorporated herein. A matting agent in the overcoat is not cited.

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Siry et al teaches to apply resin coatings to a substrate, the top coating layer being a radiation-curable varnish which contains "customary additives" including matting agents which are well-known in the art as additives to provide low gloss or muted surface finishes. The manipulation and addition of such customary agents to form a "shadow effect" would have been an obvious variation to create a desired aesthetic design, which would not patentably distinguish over the prior art. Matters related to the choice of ornamentation producing no mechanical effect or advantage considered to constitute the invention are considered obvious and do not impart patentability, In re Seid 73 USPQ 431. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of JP'571 in view of Gaeta et al and further in view of Arbogast or GB 1121082 by incorporating customary matting agents into the topcoat layer as taught by Siry et al to provide the surface with aesthetically pleasing low gloss or muted surface finishes.

10. Claims 18,28, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'571 in view of Gaeta et al alone, or alternatively further in view of Argobast et al US 5011709 or GB 1121082 in view of Barker et al US 4233343

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JP'571, Gaeta, Arbogast, and GB 1121082 are cited for the same reasons discussed above, which are incorporated herein. A primer undercoat is not cited.

Barker et al teaches a method of forming simulated 3-dimensional wood grain designs using topcoat-repellant inks, in which the pattern forming layers are applied to a substrate having thereon an under-coat (synonymous with "primer" which is polymeric as is well-known in the art) to form a background as well as to seal the surface to be coated (col. 7, 67- col. 8, 2). Per claim 29, repeating of known steps to achieve the same or enhanced effect, e.g. greater abrasion resistance, would have been an obvious variation within the purview of one skilled in the art with the expectation of forming an abrasion-resistant surface.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of JP'571 in view of Gaeta and further in view of Arbogast or GB 1121082 by incorporating an under-coat (primer) as taught by Barker et al to provide a sealed background surface onto which additional decorative layers are applied.

11. REPLY TO REMARKS

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Applicants remarks have been carefully considered specifically in view of Applicants' amendments. The new rejections above which address the amended claims incorporate the concerns and arguments raised by the remarks, and for brevity will not be repeated.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred J. Parker whose telephone number is (703) 308-3474.



Fred J. Parker
May 29, 2003
2fr9-718401

**FRED J. PARKER
PRIMARY EXAMINER**